Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Inquiry Regarding Carrier Current Systems	)	ET Docket No. 03-104
Including Broadband over Power Line	)	
Systems	)	
	)	

Comments
Of
Chugach Electric Association Inc.

Brian Hickey, Director, Technical Services
Chugach Electric Association Inc.
5601 Minnesota Dr.
Anchorage Alaska 99519-6300

August 14, 2003

Table
Of
Contents

SUMMARY

Broadband over Power Line (BPL) systems use the existing electric distribution grid to provide last-mile high-speed access and home networking, and enable advanced utility applications that promote energy efficiency and critical infrastructure reliability and security. BPL would promote the Commission's policy goals of broadband access and competition by encouraging utilities to provide retail and wholesale services in urban, suburban, and rural communities that they currently serve.

Already, utilities have engaged in several significant trials producing encouraging results. Speeds are competitive with DSL and cable modem. The service is relatively inexpensive to deploy and easy for customers to use. Many of the technical hurdles to BPL deployment in the U.S. have been overcome, but the range of BPL is limited to substantially less than a mile. As a result, utilities are interested in commercial deployment of BPL systems, which will be determined in large part by the technical rules that the FCC ultimately adopts.

The Chugach believes that Class A standards should apply to Access BPL equipment on medium voltage lines, and that the Commission should continue to use uniform radiated emission limits for both Access and In-home BPL systems as the primary means of preventing interference Chugach believes that the existing Part 15 rules for carrier current systems adequately protect against interference, and that the existing measurement methods and Verification process for equipment authorization should be retained at this time.

Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Inquiry Regarding Carrier Current Systems Including Broadband over Power Line Systems	)	ET Docket No. 03-104
	)	
	)	
	)	

COMMENTS OF Chugach Electric Association, Inc.

Pursuant to Section 1.415 of the Federal Communications Commission ("FCC") Rules, Chugach Electric Assoc,. Inc. hereby submits its comments in response to the *Notice of Inquiry* in the above referenced proceeding.[1] Chugach applauds the FCC for initiating this NOI and provides the following information on Broadband over Power Line (BPL) and suggestions for encouraging its development.

I. Introduction

Chugach Electric Association is a member owned generation transmission and distribution cooperative headquartered in Anchorage, Alaska. Chugach is the largest provider of electricity in the State of Alaska. Chugach power flows throughout Alaska's Railbelt region. Chugach serves more than 69,000 metered retail locations in a service territory which extends from Anchorage to the northern Kenai Peninsula, and from Whittier on Prince William Sound to Tyonek on the west side of Cook Inlet. Chugach provides power to Alaskans from Homer to Fairbanks through sales to wholesale and economy energy customers Matanuska Electric Association, Homer Electric Association,

[1] *Inquiry Regarding Carrier Current Systems, including Broadband over Power Line Systems*, Notice of Inquiry, *ET Docket No. 03-104* (April 28, 2003) *("FCC NOI*").

the City of Seward, Golden Valley Electric Association, and Anchorage Municipal Light & Power. Chugach also holds a certificate of public convenience and necessity (CPCN) as a long-haul telecommunications carrier backhauling cellular traffic for a local cellular provider utilizing the utility's digital microwave system.

II. BPL Systems

A. Background

Chugach has followed the advancement of broadband power line (BPL) technology both individually and as a member of the United Telecommunications Council (UTC) and United Power Line Council (UPLC) for several years. Initially and until recently Chugach has been skeptical of the technical and commercial prospects for BPL in Alaska, throughout North America, and in other locations having North American styled power systems. However, in recent months through contacts at the Cooperative Research Network (CRN) of the National Rural Electric Cooperative Association (NRECA), UTC and UPLC, and through a site visit to a trial facility, Chugach has come to believe that the technical barriers to BPL have been or are close to being overcome. However, Challenges to BPL remain. There remain the significant barriers of regulatory approval on both the federal and state level. Given success in meeting these challenges, there remains the necessity of creating a successful business case.

B. Market Considerations

The BPL business case is frequently made from the perspective of providing High Speed Internet Service, Streaming Video and Voice over IP service to consumers; however, at Chugach we believe an alternative business case can be made for the implementation of BPL as the communications backbone for a substation automation

wide area network (WAN). Currently construction of such a backbone with fiber or digital microwave is cost prohibitive and point-to-point communications using spread spectrum technology is frequently constrained by distance and terrain. Successful deployment of BPL on the sub-transmission system for "distribution station to distribution station" WAN communications could be a first step in operating the medium voltage power system more efficiently and effectively. Successful deployment of such a backbone could provide the infrastructure for later deployments, at the sub-transmission level, of looped circuit operation and high-speed multi source clearing of sub-transmission electrical faults. A deployment of this technology at the distribution feeder level would provide improved demand side management functions, critical power equipment distribution automation, critical facility monitoring, outage management, and medi-alert notification. Additionally, during system emergencies BPL would potentially provide a redundant communications path to traditional landline service.

With the BPL infrastructure in place and supporting critical electrical infrastructure successful deployment at the distribution feeder level could then facilitate provision of High Speed Internet Service, Streaming Video and Voice over IP service to consumers in selected areas where the retail business case makes sense. Of course, such an application of electric utility infrastructure outside the core business assumes that appropriate cost allocation and cross subsidization issues are resolved.

C. Commercialization of BPL

Chugach is currently considering using BPL in a WAN pilot project in 2004. Chugach is interested in deploying BPL systems for a number of reasons. First, BPL could support internal applications, such as station maintenance and operations WAN, demand side management; outage reporting and restoration, medium voltage high-speed fault clearing and automated meter reading. All of these functions will improve the efficiency, security and quality of electric services to utility customers. Second, BPL affords a unique potential to promote homeland security and critical infrastructure reliability. From a utility perspective, these benefits may very well be more significant than the new business opportunities that could be supported by BPL. Third, for the most part BPL utilizes existing infrastructure and therefore in the non-core business related environment BPL minimizes the risk of stranded investment. Finally, BPL may enable Chugach to provide our customers with an alternative or, in some cases, the only source for broadband Internet access and associated applications, such as voice, video-on-demand, home security, and smart-home appliances.

There are currently several drawbacks to implementation of a BPL system. First among these is BPL's immature corporate and manufacturing base. Demonstrated manufacturing and support capability is a fundamental requirement for all critical electrical utility infrastructure. Second, it would be imprudent to utilize an unproven communications technology in the implementation of infrastructure critical applications such as high-speed fault clearing. And third, Chugach is always cautious about attaching additional unproven equipment to energized high voltage conductors. Whether Chugach

deploys BPL as a part of critical electric utility infrastructure or commercial services will be determined in large part by the BPL technical rules that the FCC adopts and by the Regulatory Commission of Alaska. Without a sound, predictable and favorable regulatory environment, manufacturers of BPL will be unable to finance and build sufficient manufacturing and support infrastructure to meet the relatively high thresholds required by Chugach and other electric utilities for critical equipment infrastructure.

Chugach appreciates the support that the FCC has shown for BPL, and urges it to continue to pursue regulatory policies that encourage the development of current and next generation BPL systems. Technology has brought BPL to the verge of commercial deployment. This proceeding sets the stage toward making BPL a commercial reality.

WHEREFORE, THE PREMISES CONSIDERED, Chugach is pleased to provide these comments on the NOI.

Respectfully submitted,

Chugach Electric Association Inc.

By: _____

Brian Hickey
Director, Technical Services
Chugach Electric Assoc,. Inc.
5601 Minnesota Dr.
Anchorage, Alaska. 99508
(907) 762-4440

August 18, 2003